1. Work out:

<table>
<thead>
<tr>
<th>a) 40 + 29 = ___</th>
<th>b) ___ - 75 = 109</th>
</tr>
</thead>
<tbody>
<tr>
<td>69</td>
<td>184</td>
</tr>
<tr>
<td>c) 22 × ___ = 2200</td>
<td>d) 515 ÷ 5 = ___</td>
</tr>
<tr>
<td>100</td>
<td>103</td>
</tr>
</tbody>
</table>

2. Which shape am I?
Complete the following table about flat and solid shapes.
Use the shape names below.
(Note: There are 2 extra shape names.)

<table>
<thead>
<tr>
<th>cube</th>
<th>cone</th>
<th>cylinder</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>rectangle</th>
<th>sphere</th>
<th>square</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>a) I look like a football.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>b) All my 6 faces are squares.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>c) I am a flat shape with 4 lines of symmetry.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>d) I have 3 faces, 2 edges and 0 vertices.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. Look at each scale and complete the sentences.

a) The arrow points to ________.

b) The weighing scales read ________ kg.

c) This is a 1 litre measuring jug.

It contains ________ ml of water.

4a) Draw all the possible lines of symmetry, if any, of the following shapes.

i) ii) iii)

b) Which two of the shapes below have the same area?

Shape ________ and Shape ________ have the same area.
5. Choose numbers from the following table to fill in the boxes below. Use each number only once.

<table>
<thead>
<tr>
<th>34</th>
<th>35</th>
<th>36</th>
<th>37</th>
<th>38</th>
<th>39</th>
<th>40</th>
<th>41</th>
</tr>
</thead>
<tbody>
<tr>
<td>42</td>
<td>43</td>
<td>44</td>
<td>45</td>
<td>46</td>
<td>47</td>
<td>48</td>
<td>49</td>
</tr>
</tbody>
</table>

a) two odd numbers
b) two multiples of 8
c) two square numbers
d) a pair of numbers that adds to 90

6a) This clock shows the time Jamie wakes up in the morning during the week. 

At what time does Jamie wake up?

b) Jamie leaves home for school at 5 minutes to 8.

i) Mark this time on the clock.  
ii) He arrives at school 15 minutes later.  

At what time does he arrive at school?

iii) This clock shows the time Jamie arrives back home from school.

Write down an estimate for the size of the smaller angle, between the minute hand and the hour hand, on this clock.
7a) **Tick (✓) the correct statement for each of these two decimal numbers.**

*(Note: There is only ONE correct statement each time.)*

i) \(11.25\)

- It has got 2 tenths. [ ]
- It has no wholes. [ ]
- It is equal to \(11 \frac{1}{2}\). [ ]

ii) \(16.7\)

- It is equal to \(167 \times 10\). [ ]
- It has got 7 hundredths. [ ]
- When rounded to the nearest whole number, the result is 17. [ ]

b) **Use all the number cards below to write a decimal number which:**

- has got no tenths
- has 8 in the units position
- is between 20 and 30

```
0 2 6 8
```

```
[ ][ ][ ] . [ ][ ][ ]
```

c) **Circle the numbers which together add up to the decimal number in the box.**

```
5
8
0.09
50
0.8
```

```
58.9
```

```
5
8
0.9
```

```
8
```

```
0.8
```

```
0.09
```

```
50
```

```
5
```
8. Martina is sick. The doctor tells Martina to take 5 millilitres (ml) of syrup 3 times a day for 5 days.

a) How many millilitres (ml) of syrup does Martina take everyday?

_______ ml

b) The capacity of the bottle is 90 millilitres (ml).

How much syrup is left in the bottle after 5 days?

_______ ml

c) Work out the number of teaspoons Martina needs in order to fill the whole water bottle with water.

_____ teaspoons
9. A group of seven friends are collecting the stickers of their favourite cartoon characters.

<table>
<thead>
<tr>
<th>Friends</th>
<th>Jane</th>
<th>Mario</th>
<th>John</th>
<th>Susan</th>
<th>David</th>
<th>Mary</th>
<th>Tom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of stickers</td>
<td>46</td>
<td>87</td>
<td>47</td>
<td>61</td>
<td>90</td>
<td>13</td>
<td>76</td>
</tr>
</tbody>
</table>

a) Work out the total number of cartoon stickers that the friends have collected.

\[
\text{\underline{_____ stickers}}
\]

b) What is the mean number of cartoon stickers collected by the seven friends?

\[
\text{\underline{_____ stickers}}
\]

c) Write down the total number of stickers collected by the girls as a fraction of the total number of stickers collected by all the friends. Write your answer in its simplest form.

\[
\underline{\underline{\text{\underline{\underline{_____}}}}}
\]
10. This graph shows the **distance travelled** and the **time taken** by a tourist on a holiday.

![Graph showing distance travelled versus time taken]

**Kilometres travelled in hours**

Distance in km

<table>
<thead>
<tr>
<th>0</th>
<th>100</th>
<th>150</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Time in hours

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**a)** How many kilometres did he travel in:

i) 3 hours?  

ii) 90 minutes?

**b)** How long did he take to travel:

i) 50 km?  

ii) 125 km?

**c)** The tourist wants to travel **200 km**.

i) How long will he take?  

ii) Explain your answer.

________________________________________________________________________

________________________________________________________________________
11. Julia has a number of equilateral triangles. Each equilateral triangle has a perimeter of 12 cm.

a) Work out the length of each side of the equilateral triangle.

\[
\text{_____ cm}
\]

b) Julia uses these triangles to form one big equilateral triangle.

i) Work out the perimeter of the big equilateral triangle.

\[
\text{_____ cm}
\]

ii) Shade \(\frac{1}{4}\) of the big equilateral triangle.


a) i) Which of these two greengrocers sells oranges at a cheaper price?

Tick ( ) the correct answer.

Maria’s Greengrocer [ ] Karl’s Greengrocer [ ]

ii) By how much (per kg) are the oranges cheaper?

\[\text{€ _______}\]

b) Dad wants to buy 12 kg of oranges. How much does he save by buying from the cheaper shop?

\[\text{€ _______}\]
13. All the Year 6 children in a school were asked about their favourite hobby.

\[ \frac{1}{10} \] of all the children like

**COMPUTER GAMES**

\[ \frac{1}{5} \] of all the children like

**READING**

30 children like **SPORTS** best

\[ \frac{1}{10} \] of all the children have

**OTHER HOBBIES**

\[ 10\% \] of all the children like

**COLLECTING STICKERS**

a) What **percentage** of the children like **computer games**?

\[ \boxed{\phantom{0} \%} \]

b) **More children prefer reading** rather than **collecting stickers**.

**Is this True or False?**

Tick (✓) the correct answer.

True [ ] False [ ]

**Give a reason** for your answer.

__________________________________________________________

__________________________________________________________

c) **How many Year 6** children are there in this school?

\[ \boxed{\phantom{0}} \] children
14. The problems a) and b) shown below are incomplete. 
You need at least one more fact from A, B, or C before you can solve them.
First choose the missing fact and then work out the problems.

a) There are 6 rows of soldiers with an equal number of soldiers in each row.
How many soldiers are there?

*Missing fact:*

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>There are over 100 soldiers.</td>
</tr>
<tr>
<td>B.</td>
<td>There are 25 soldiers in each row.</td>
</tr>
<tr>
<td>C.</td>
<td>There are 12 missing soldiers.</td>
</tr>
</tbody>
</table>

*Working:*

Ans: _______ soldiers

b) For a school outing, the headmaster needs to get buses for 810 students. How many buses does he need?

*Missing fact:*

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>One bus carries 30 students.</td>
</tr>
<tr>
<td>B.</td>
<td>30 buses carry 1 student.</td>
</tr>
<tr>
<td>C.</td>
<td>30 students were absent for the outing.</td>
</tr>
</tbody>
</table>

*Working:*

Ans: _______ buses
15. Dad has **9 pieces of rope**, each **34 cm long**.

a) What is the **total length** of the **9 pieces of rope**?

\[
\text{\underline{\hspace{3cm}}} \text{ cm}
\]

b) Dad **tied all the pieces of rope together** to form a long rope. He used **5 cm** of rope to make each knot.

i) How many **knots** are needed to tie all the pieces together?

\[
\text{\underline{\hspace{2cm}}} \text{ knots}
\]

ii) How **long** is the rope when all the **9 pieces** are tied together?

\[
\text{\underline{\hspace{2cm}}} \text{ cm}
\]

c) Dad wants to use this rope to reach a **height of 2.95 m**.

i) Does he have **enough rope** to reach this height?

Tick (\[\checkmark]\) the correct answer.

\[
\begin{array}{cc}
\text{Yes} & \text{No}
\end{array}
\]

ii) **Give a reason** for your answer.

__________________________________________

__________________________________________
16. From a boutique

<table>
<thead>
<tr>
<th>a suit and a hat</th>
<th>a dress and a hat</th>
<th>a suit and a dress</th>
</tr>
</thead>
<tbody>
<tr>
<td>cost €88</td>
<td>cost €68</td>
<td>cost €130</td>
</tr>
</tbody>
</table>

a) Deborah wants to buy **two suits, a hat and a dress**.

**How much** will Deborah spend **altogether**?

\[ \text{€ } \underline{\text{________}} \]

b) What is the **price of one suit**?

\[ \text{€ } \underline{\text{________}} \]

---

END OF PAPER

**Marking Scheme**

<table>
<thead>
<tr>
<th>Mental Paper</th>
<th>Nos.</th>
<th>20 × 1 mark</th>
<th>= 20 marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written Paper</td>
<td>Nos.</td>
<td>4 × 4 marks</td>
<td>= 16 marks</td>
</tr>
<tr>
<td></td>
<td>5 - 12</td>
<td>8 × 5 marks</td>
<td>= 40 marks</td>
</tr>
<tr>
<td></td>
<td>13 - 16</td>
<td>4 × 6 marks</td>
<td>= 24 marks</td>
</tr>
</tbody>
</table>

**TOTAL** 100 marks